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## MWW Protocol for Water System Activities that Impact Lead Services

### I. Lead Service Leaks

MWW will respond to a report of a leak and investigate. If the leak is determined to be on a service, the investigator will determine if it is on the “city” side or the “private” side of the service. If the leak is not causing a safety hazard or property damage, water will be kept “on” while preparations are made to fix the leak so that there will be water to the building. Water will be turned off at the time of excavation.

#### Leak on “city side”

MWW will

1. Inform resident, property owner and registered agent (if known) of likelihood of lead service and need for replacement of service. MWW will provide an information packet. MWW will inquire as to vulnerable populations as per MHD script, complete checklist/questionnaire.
2. Provide information on hazards of lead and strongly encourage owner to replace their side at this time as this is most beneficial for health of residents and most cost-effective. If owner declines, note on checklist/questionnaire.
  - a. Offer info on process to replace service and various financing options available to homeowners, when finalized.
3. Notify MHD of service leak by transmitting the checklist/questionnaire to MHD via email. The following available information will be provided: address of property, whether city side or private side or both being replaced, contact information (primary contact name and telephone number if possible), whether or not there are vulnerable populations involved.
4. Arrange to have bottled water service or pour-through filter (TBD) provided to customer at MWW expense for one month, by calling designated phone number.
5. Replace service from water main up to and including curbstop. A service insulator will be installed between the curbstop and remaining private lead service to prevent galvanic corrosion.
  - a. If customer is willing and conditions permit, allow private plumber hired by customer to utilize excavation to replace private service.
  - b. Otherwise, complete the MWW service replacement and close the excavation. It may be necessary to turn off a section of the water main in order to replace the service, in which case adjacent properties will be without water for some period of time. If between 6:00 a.m. and 10:00 p.m., properties where water was turned off will receive an information packet and “flush your pipes now” door hanger. If between 10:00 p.m. and 6:00 a.m., MWW will return during daylight to distribute information packet/brochure and “flush your pipes” door hanger.
6. Attempt to directly hand information packet to the resident when water is turned on.
  - a. Emphasize importance of whole-house flushing.
  - b. Request that resident accept MWW offer of free lead analyses, by owner volunteering to collect samples to help us better understand impact of this lead service disturbance on lead levels at the tap. Please note on checklist.
  - c. Water Quality Section will continue with approach of collecting 12 consecutive 1-liter samples, plus one well-flushed, after six-hour stagnation. Collect one set as

DRAFT

## DRAFT

- soon as possible after service replacement, preferably within 24 hours.
- d. If samples have lead > 15 µg/L, MHD will call and advise resident to perform whole house flush again, and reemphasize how to reduce exposure to lead. Consider resampling based on extent of lead > 15 µg/L. (There is no “baseline” information against which to compare these results.)
  7. After about one month, Water Quality Section will ask customer to again collect samples. Protocol for water test will be to collect 12 consecutive 1-liter samples, plus one well-flushed, after six-hour stagnation. MWW will continue to provide alternate water source until the results of these samples are available, after which time the residents will be offered lead-reducing advice and any tailored outreach by MHD consistent with sample test results. Continuation of alternate water source will be at judgement and expense of resident.
  8. MWW and MHD will periodically review sample results to see if conclusions can be drawn about lead at customer’s tap after partial or full lead service line replacements. Cost and benefits of continued sampling and of format of sampling will be periodically evaluated, while maintaining protection of public health, and be mutually agreed upon.

**Leak on “private side”**

MWW will

1. Inform resident, property owner and registered agent (if known) of leak and need for repair
  - a. Provide information on hazards of lead (information packet or brochure) and strongly encourage owner to replace their service rather than repair it, as this is most beneficial and cost-effective for health of residents.
  - b. Offer info on process to replace service and various financing options available.
  - c. Provide a list of at least three plumbing contractors who can complete/conduct the owner/private side replacement. If owner declines, note on checklist/questionnaire.
1. Notify MHD of service leak by transmitting the checklist/questionnaire via email. MHD will be given the following information: address of affected property, whether city side or private side or both are being replaced, available contact information (primary contact name and telephone number), whether or not there are vulnerable populations involved.
2. Emphasize whole-house flushing and provide information packet.
3. If customer opts to replace their side of the service, MWW will
  - a. Replace the “city side” of service from water main up to and including curbstop if customer opts to replace their side of the service.
  - b. Request that resident accept MWW offer of free lead analyses, by owner volunteering to collect samples to help us better understand impact of this lead service disturbance on lead levels at the tap. Please note on checklist. Email completed survey/checklist/questionnaire to (TBD). Water Quality Section will continue with approach of collecting 12 consecutive 1-liter samples, plus one well-flushed, after six-hour stagnation. Collect one set as soon as possible after service replacement, preferably within 24 hours. If there is minimal/low lead at tap, discontinue sampling. Otherwise, request that customer collect another set of samples in one to two weeks.
  - c. Not provide water alternative as this is a failure of private property, not an

## DRAFT

action initiated by MWW.

4. If customer does not replace their side of the service, MWW will not replace the “city side” of the service. Residents will have received the information packet at time they were notified on the leak.

## II. Lead Service Line Disruption During Sewer Construction Work

Water service lines made of lead may be disturbed during sewer construction projects. MWW is currently investigating how these situations will be identified and who will coordinate the response. This section will be expanded when a procedure has been identified. **If lead services are severed, the procedures for “Lead Service Leaks”, above, will be used.**

## III. Curb Stop Replacement or Water Meter Valve Repair

This section applies to replacing the curb stop or replacing water meter valve(s) if they are broken by MWW during the course of water meter work. **Because both these activities require severing of the lead service line, the procedure for “Lead Service Leaks”, above, will be used.**

## IV. Repairing Water Main Breaks When Lead Services are within the Shutoff Area

A water main break can require an emergency shutoff (if creating hazard or property damage) in which case notices that water will be turned off are not able to be provided to residents. If the situation is not an emergency, the leak can be “throttled” (flow restricted to reduce wasted water but main remains pressurized and hydrants remain operable) and the main break repair will be scheduled and residents will be notified in advance of the shutoff. Water must be turned off to the section of the water main where the break is located so that the crew can safely excavate and repair the break. The services themselves may or may not be damaged during the break or repair. While the main is off, there can be flow reversals from building plumbing and services which could dislodge particles from the plumbing. MWW disinfects the pipe in the area of the break and does extensive flushing using hydrants before the repaired water main is put back into service. Flushing of services is prudent whether the service is made of lead or copper.

In non-emergency situations, if the water services are likely to be made of lead, MWW will

1. Notify residents before the water is shut off that the water service is likely to be made of lead, provide the information packet, and tell residents about the importance of whole-house flushing after water main is returned to service. If no response, leave information packet at door. **If lead services are severed, the procedures for “Lead Service Leaks”, above, will be used.**
2. If 1., above, has not been carried out because it was between 10:00 p.m. and 6:00 a.m., MWW will return during daylight hours and knock on the door. The brochure and door hanger will be handed to the resident or placed on the doorknob if no response.

## DRAFT

In emergency situations, when water services are likely to be made of lead, MWW will:

1. Notify residents after the main break has been controlled and before it is returned to service that the water service is likely to be made of lead, provide the information packet, and tell residents about the importance of whole-house flushing after water main is returned to service. If no response, leave information packet at door. **If lead services are severed, the procedures for “Lead Service Leaks”, above, will be used.**
2. If 1., above, has not been carried out because it was between 10:00 p.m. and 6:00 a.m., MWW will return during daylight hours and knock on the door. The brochure and door hanger will be handed to the resident or placed on the doorknob if no response.

## When Water is Turned Off at Curb Stop or at Water Meter

Water to a building can be turned off at the curbstop in the street or at the valve(s) inside the property near the meter. Water can also be turned off at the meter by homeowners, plumbers or MWW. If pressure is lost due to tap(s) being opened within the building, flow reversals within building piping are likely. Flushing of internal plumbing is prudent whether the service is copper or lead.

When the curbstop or meter valves are operated by MWW staff, MWW will

1. Provide resident with notification that water service is likely to be made of lead, information on importance of whole-house flushing after water work has been completed and information on lead awareness and drinking water safety. Info will be left at the premise.

NOTE: When completed, the single brochure should be available at the Permit Center and be given to plumbers when they pull permits.

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MWW and MHD will meet regularly to review results and discuss any changes to these protocols.

“Information packet” currently contains four documents: “Lead Awareness and Drinking Water Safety, How to Flush Internal Building Pipes, Water Filters to Remove Lead, and Milwaukee Area Laboratories Accredited for Analysis of Lead (Pb) in Drinking Water. MWW and MHD are working to consolidate these into a single brochure plus door hanger.

The “flush your pipes now” door hanger will include notification that service is likely to be made of lead and need to take precautions, instructions for whole house flushing, and internet address where to find additional information.

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